

CLAIM OR CLAIMS

1. A microparticle which is invisible to the naked eye characterized in that it is marked with digitally coded machine readable information, the machine readable information being etched through the microparticle as at least one hole or notch.

2. A microparticle as claimed in Claim 1, wherein the microparticle is in the form of a wafer whose thickness is from 0.1 $\mu$ m to 5 $\mu$ m and whose width and length are both in the range of 0.5 $\mu$ m to 50 $\mu$ m.

3. A microparticle according to Claim 1, wherein the machine readable information is in the form of a binary code.

4. A microparticle according to Claim 1 or Claim 2, wherein the microparticle incorporates an orientation marker.

5. A microparticle according to any preceding claim comprising silicon, silicon dioxide or a metal.

6. A microparticle according to Claim 4, comprising silicon or silicon dioxide.

7. A microparticle according to any preceding claim whose machine readable code is readable by an optical device.

8. A microparticle according to any preceding claim, in which the code is representative data comprising a multiplicity of bits.

9. A set of a multitude of substantially identically encoded microparticles each according to any preceding claim.

10. A set of microparticles according to Claim 9, all being of substantially the same size and shape.

11. A tagging compound comprising a powder, fluid or gas mixed with one or more sets of microparticles, wherein each set is a multitude of substantially identically encoded microparticles each marked with digitally coded

machine readable information, the machine readable information being etched through the microparticle as at least one hole or notch, such that the presence of the microparticle is undetectable to the naked eye.

12. A tagging compound comprising one or more set or sets of microparticles according to Claim 9 mixed with a powder, fluid or gas, such that the presence of the microparticles in the mixture is undetectable to the naked eye.

13. A tagging compound according to Claim 11, comprising a paint or ink or fluid dye.

14. A tagging compound according to Claim 11, comprising a smoke dye.

15. A container for tagging an object or objects with a readable code, said container containing a tagging compound comprising a powder, fluid or gas mixed with one or more set or sets of microparticles, wherein each set is a multitude of substantially identically encoded microparticles each marked with digitally coded machine readable information, the machine readable information being etched through the microparticles as at least one hole or notch, and having means for dispensing the tagging compound from the container.

16. A container for tagging an object or objects with a readable code, containing a tagging compound according to Claim 11, and having means for dispensing the tagging compound from the container.

17. A method of marking an object invisibly with a machine readable code, characterized by applying to the object a set of a multitude of substantially identically encoded microparticles each marked with digitally coded machine readable information, the machine readable information being etched through the microparticle as at least one hole or notch.

18. A method of marking an object invisibly with a

machine readable code, characterized by applying to the object a set of microparticles according to Claim 9.

19. A method of marking a vehicle invisibly with a machine readable code, characterized by applying a coat of paint or ink or fluid dye to the vehicle surface a tagging compound comprising a powder, fluid or gas mixed with one or more set or sets of microparticles, wherein each set is a multitude of substantially identically encoded microparticles each marked with digitally coded machine readable information, the machine readable information being etched through the microparticle as at least one hole or notch.

20. A method of marking a vehicle invisibly with a machine readable code, characterized by applying to the vehicle a set of a multitude of substantially identically encoded microparticles, in which the set of microparticles is part of a tagging compound according to Claim 13 and is applied as a coating to the vehicle surface.

21. A method of an inherently valuable item such as jewelry invisibly with a machine readable code, characterized by applying to the inherently valuable item such as jewelry a set of a multitude of substantially identically encoded microparticles each invisible to the naked eye and marked with a machine readable code, in which the set of microparticles is part of a tagging compound comprising a powder, fluid or gas mixed with one or more set or sets of microparticles, wherein each set is a multitude of substantially identically encoded microparticles each marked with digitally coded machine readable information, the machine readable information being etched through the microparticle as at least one hole or notch and is supplied as a transparent hardenable lacquer to the surface of the item.

22. A method of marking an inherently valuable item such as jewelry invisibly with a machine readable code,

23. A method of marking an inherently valuable item such as a plastic card, credit card or charge card invisibly with machine readable information, characterized by applying to the inherently valuable item such as a plastic card, credit card or charge card, a set of a multitude of substantially identically encoded microparticles each invisible to the naked eye and marked with digitally coded machine readable information, in which the set of microparticles is part of a tagging compound according to Claim 13 and is applied selectively as an ink or lacquer.

25. A security device for cash machines or other public access dispensing devices, fitted with a container according to Claim 16 in the form of an automatically actuatable smoke canister filled with the tagging compound which comprises a smoke dye.

26. A microparticle having at least one hole or notch

etch therethrough representative of a unique code selected from a multiplicity of such codes.

27. A microparticle which has been etched to have a predetermined shape representative of a unique code selected from a multiplicity of such codes.

2025 RELEASE UNDER E.O. 14176